

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
2 June 2005 (02.06.2005)

PCT

(10) International Publication Number  
**WO 2005/049607 A1**

(51) International Patent Classification<sup>7</sup>: C07D 403/14, 403/12, A61K 39/395, 31/53, A61P 37/00, A61M 1/36, C07K 1/22, 16/24

Lyne [CA/CA]; 1973 de la Victoire, Laval, Quebec H7M 3E5 (CA).

(21) International Application Number:  
PCT/CA2004/002003

(74) Agents: DUBUC, J. et al.; Goudreau Gage Dubuc, Stock Exchange Tower, 800 Place Victoria, Suite 3400, P.O. Box 242, Montreal, Quebec, H4Z 1E9 (CA).

(22) International Filing Date:  
22 November 2004 (22.11.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

#### Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

(30) Priority Data:  
60/524,021 24 November 2003 (24.11.2003) US

#### Published:

— with international search report  
— with amended claims and statement

(71) Applicant (for all designated States except US): PROMETIC BIOSCIENCES INC. [CA/CA]; 6100 avenue Royalmount, Montreal, Quebec H4P 2R2 (CA).

#### Date of publication of the amended claims and statement:

14 July 2005

(72) Inventors; and  
(75) Inventors/Applicants (for US only): PENNEY, Christopher [CA/CA]; 12787 Joron, Pierrefonds, Quebec H8Z 3K7 (CA). ZACHARIE, Boulos [CA/CA]; 3202 Honoré de Balzac, Laval, Quebec H7P 5Y3 (CA). ABBOTT, Shaun, D. [CA/CA]; 9 de L'Eglise, Pointe-Claire, Quebec H9S 5J1 (CA). BIENVENU, Jean-François [CA/CA]; 4195 Stanislas, Laval, Québec H7R 6C9 (CA). CAMERON, Alan, D. [CA/CA]; 2264 Old Orchard, Montreal, Quebec H4A 3A8 (CA). DUCEPPE, Jean-Simon [CA/CA]; 118 McAndrew, St-Colomban, Quebec J5K 1K5 (CA). EZZITOUNI, Abdallah [CA/CA]; 1943 Chemin Nice, Laval, Quebec H7S 1G5 (CA). FORTIN, Daniel [CA/CA]; 265 Couture, Rosemère, Quebec J7A 2S2 (CA). HOUDE, Karine [CA/CA]; 7762 Lajeunesse, Montreal, Quebec H2R 2J4 (CA). MOREAU, Nancie [CA/CA]; 4195 Stanislas, Laval, Quebec H7R 6C9 (CA). WILB, Nicole [CA/CA]; 4865 Fulton, Montreal, Quebec H3W 1V2 (CA). GROUIX, Brigitte [CA/CA]; 5078 Fabre, Montreal, Quebec H2J 3W4 (CA). GAGNON,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TRIAZINE DIMERS FOR THE TREATMENT OF AUTOIMMUNE DISEASES

(57) Abstract: Compounds containing two mono- or disubstituted triazine rings covalently linked by an organic linker, but not linked directly to each other, may be used to treat autoimmune diseases. Autoimmune diseases which are amenable to treatment with compounds of this invention include rheumatoid arthritis, systemic lupus erythematosus (SLE), idiopathic (immune) thrombocytopenia (ITP), glomerulonephritis and vasculitis. The present invention also relates to reducing drug toxicity which often accompanies traditional therapies for autoimmune diseases. The compounds may also be used to bind antibody *in vitro* or *ex vivo*.

WO 2005/049607 A1